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• Americas: Chikungunya total grows by 440
• Bolivia: MSF develops an information system for exterminating the bugs that transmit Chagas
• Brazil: Brazil’s health minister seeks to stem inefficiencies to cut costs
• Haiti: Risks to women and girls soar in hurricane-slammed Haiti
Long-Term Follow-up of Service Members and Veterans Exposed to Chemical Warfare Agents during their Military Service in Iraq between 2003 and 2011

The purpose of this document is to provide guidance for long-term follow-up and patient education to healthcare providers caring for Service members and Veterans exposed to chemical warfare agents (CWA) (sulfur mustard—a blister agent and sarin—a nerve agent) during military deployment to Iraq, as part of Operation Iraqi Freedom and/or Operation New Dawn (OIF/OND), between 2003 and 2011.

Appendix B provides a link to the Multi-Service Tactics, Techniques, and Procedures for Treatment of CWA Casualties and Conventional Military Chemical Injuries and provides sources of information regarding exposures to other substances.

U.S. MILITARY

Report: Vets face serious health issues, but are less likely to complain about them

10 November - Veterans are more likely to contract cancer, battle heart disease and face substance abuse problems than their civilian peers, but are also less likely to see problems with their overall health, according to a new study released today. The report ... presents a warning for civilian doctors that they may need to dig deeper into veterans’ medical files to make sure health problems aren’t being overlooked. ... The survey ... found that 57 percent of male veterans and 56 percent of female veterans described their overall health as very good or excellent. Only 51 percent of civilians in both groups reported the same. Researchers also found that veterans were more likely to be physically active than their civilian peers and more likely to have some type of health insurance. But they also saw that those positives may be obscuring more serious health threats. Veterans under 40 were more often than their peers to get insufficient sleep (50 percent to 36 percent) of pick up smoking (26 to 21). And more veterans suffer from heart disease Military Times

Three U.S. senators ask Mylan for EpiPen military reimbursements

7 November - Three members of the U.S. Senate Judiciary Committee, ahead of a planned hearing late this month, said Mylan NV appears to have greatly overcharged the military for its lifesaving allergy treatment EpiPen and asked the pharmaceutical company when it plans to reimburse the Department of Defense. The reimbursement demand came in a letter on Monday to Mylan Chief Executive Heather Bresch, from Senate Judiciary Chairman Charles Grassley, an Iowa Republican, and committee members Richard Blumenthal of Connecticut and Amy Klobuchar of Minnesota, both Democrats. "We are alarmed that Mylan may have overcharged our military for this life-saving drug," the Senators wrote. They said Mylan for years may have knowingly misclassified EpiPen as a generic product in order to avoid higher rebates the company would have had to pay state and federal Medicaid programs had it been classified as a branded product. Reuters


October 2016 - From July 2015 through June 2016, a total of 447 members of the active (n=383) and reserve (n=64) components had at least one medical encounter with a primary diagnosis of cold injury. The numbers of affected individuals in both components were the lowest since the 2011–2012 cold season, when the total was 394. In the active component, the service-specific incidence rates for each of the four services were lower than the respective rates for the previous (2014–2015) cold season. Frostbite was the most common type of cold injury. During the five cold seasons in the surveillance period (2011–2016), rates...
Fact Sheets:  
Sulfur Mustard Exposure and Cherry Angiomas  

A growing body of medical and scientific literature indicates that cherry angiomas develop in some people following moderate to severe symptomatic exposure to sulfur mustard. Cherry angiomas may develop between 1 and 20 years after exposure. Two new APHC fact sheets are available on cherry angiomas which are common skin growths. Cherry angiomas are benign skin findings, have no related symptoms, and usually require no treatments.

Fact Sheet for Patients  
Fact Sheet for Providers  

GLOBAL

Adding music to pain meds may reduce pain

4 November - As a complement to traditional pain relief tools like medication, listening to music may lessen acute or chronic pain related to cancer and other conditions, according to a new review. ... [Jin Hyung] Lee reviewed 97 randomized controlled trials conducted between 1995 and 2014 that included a total of 9,147 participants. Most trials involved music therapy, which typically involves interactions with a music therapist, while a handful of trials looked at music medicine, which mainly involves exposure to “prerecorded music experiences” selected for their effects, Lee writes in the Journal of Music Therapy. ... Overall, people getting the music intervention in their trial rated their pain intensity about one point lower on a zero to 10 scale after music sessions compared to groups that got no music. But the results were not consistent among all studies, Lee notes. ... Heart rate, blood pressure and respiration rate were all found to be lower among participants in music groups in some studies. Reuters

Big brain projects urged to aid public health

8 November - Major brain-mapping projects have multiplied in recent years, as neuroscientists develop new technologies to decipher how the brain works. These initiatives focus on understanding the brain, but the World Health Organization (WHO) wants to ensure that they work to translate their early discoveries and technological advances into tests and treatments for brain disorders. "We think there are side branches from projects that could be pursued with a very small investment to benefit public health," says Shekhar Saxena, director of the WHO’s mental-health and substance-abuse department. ... All of these projects focus on basic research on the brain or the development of sophisticated tools to study it. Clinical applications are an ultimate, rather than an immediate, goal. But at the Geneva meeting, project leaders agreed, in principle, that they should do more to adapt brain-imaging technologies for use in clinical diagnoses. "The WHO is concerned that the emphasis on building these very expensive devices could worsen the health disparities that we have now between the developed and underdeveloped world," says Walter Koroshetz, director of the US National Institute of Neurological Disorders and Stroke, which is part of the BRAIN Initiative. Nature
Gut bacteria 'may help drugs fight cancer'

7 November - Bacteria living deep inside the digestive system seem to alter how cancer drugs work, a study suggests. Immunotherapies - which harness the body's own defences to fight tumours - can clear even terminal cancer in a small proportion of patients. However, a small study by the University of Texas found those harbouring a more diverse community of gut bugs are more likely to benefit. ... Immunotherapies are one of the most exciting breakthroughs in treating cancer. They work by taking the brakes off the immune system to help it to attack tumours more easily. The research group compared the gut bacteria in 23 patients who responded to the therapy and 11 who did not. ... The study, presented at the National Cancer Research Institute's Cancer Conference in Liverpool, found Ruminococcus bacteria in much higher levels in those that responded to treatment. It suggests that it may be possible to boost the effectiveness of immunotherapy by altering the balance of bacteria in the gut. BBC News

Home exposure a risk factor in chikungunya outbreaks

7 November - Chikungunya outbreaks seem to be fueled by infections in and around the home, with women more likely to get sick, according to a study today that focused on a small rural village in Bangladesh. ... The team analyzed who did and didn't get sick in a 2012 chikungunya outbreak in a village about 60 miles outside of the capital city Dhaka. ... Though the virus is spread by mosquitoes, researchers found that more than a quarter of the cases occurred in households less than 200 meters apart, making up small clusters, which the researchers said was an unexpected finding. When they examined movement patterns in the Bangladeshi population they found that women spent 66% of their time at home between 8 a.m. and 8 p.m., while men spent 45% of their time at home. Given that the mosquitoes carrying chikungunya virus don't travel far, being at home was a risk factor for infections during outbreak settings. CIDRAP News Scan (fourth item)

Malaria drugs' complete failure tracked

4 November - Scientists have developed a way to track the spread of a dangerous form of malaria that cannot be treated with the main therapy. Doctors in Cambodia reported the complete failure of artemisinin and piperaquine - the key drugs taken to kill malaria - this year. The discovery of resistance markers, reported in the Lancet, will allow scientists to track the threat. ... Artemisinin resistance has been known about for years, but a recent rise in resistance to piperaquine as well means the main malaria treatment, taking both together, is starting to fail. ... Dr Roberto Amato, from the Wellcome Trust Sanger Institute, told the BBC News website: "The good news is we're starting to get clues on which treatment to use." Curiously, these resistant parasites appear to still be susceptible to an older drug - mefloquine. One theory is that the malaria parasites cannot resist both mefloquine and piperaquine, so doctors may be able to rotate which drugs are used. BBC News
Paralyzed monkeys walk again with wireless 'brain-spine interface'

9 November - Swiss scientists have helped monkeys with spinal cord injuries regain control of non-functioning limbs in research which might one day lead to paralyzed people being able to walk again. The scientists, who treated the monkeys with a neuroprosthetic interface that acted as a wireless bridge between the brain and spine, say they have started small feasibility studies in humans to trial some components. ... Publishing their results in the journal Nature on Wednesday, the team said the interface works by decoding brain activity linked to walking movements and relaying that to the spinal cord – below the injury – through electrodes that stimulate neural pathways and activate leg muscles. In bypassing the injury and restoring communication between the brain and the relevant part of the spinal cord, the scientists successful treated two rhesus monkeys each with one leg paralyzed by a partial spinal cord lesion. Reuters

Study finds antibiotic-rich wastewater affects bacterial diversity

4 November - A study of a plant that treats wastewater from bulk drug production facilities in India suggests that the high levels of antibiotics present in the water affect microbial diversity and may play a role in spreading antimicrobial resistance. ... The analysis found a high level of drug-resistant bacteria in the water and low overall bacterial diversity, despite the regular addition of human sewage to uphold microbial activity. The overall bacterial diversity in samples taken from the plant’s aeration tanks was considerably lower than corresponding samples from seven other wastewater treatment plants. The authors of the study conclude that the high levels of antibiotics present in the waste modulate the microbial communities, which not only affect the efficiency of the waste treatment process but can also promote resistance. CIDRAP News Scan (first item)

ZIKA VIRUS

Computer models help forecast spread of Zika virus

7 November - ... [R]esearchers are leveraging large-scale computational models that integrate socio-demographic and travel data as well as simulations of infection transmission—requiring the computing power of 30,000 processors simultaneously—to project the path of [Zika virus]. The Global Epidemic and Mobility (GLEaM) model has been used in the past to simulate the spread of Ebola, H1N1 flu, and other outbreaks on a worldwide scale. However, in forecasting Zika, researchers have relied more on the historical patterns of mosquito-borne diseases such as chikungunya and dengue. While the Zika virus can also be transmitted sexually, their computer model does not take that mode of transmission into consideration. They describe the Zika virus epidemic as “characterized by slow growth and high spatial and seasonal heterogeneity, attributable to the dynamics of
Mouse experiments with Zika antibody suggest protection for fetuses

7 November - In early studies on mice, a research team has found a Zika virus antibody that when given to pregnant animals protected their fetuses, and also protected adult mice from the disease. The findings raise hope for a potential treatment to prevent maternal-fetal transmission of the virus to prevent microcephaly and other devastating birth defects until a vaccine is available and also may help guide vaccine development. ... [T]he antibodies—called ZIKV-117—neutralized all five Zika strains, including African, Asian, and American lineages. ... [R]esearchers gave it to pregnant mice 1 day before or 1 day after they were experimentally infected with the virus. Compared with mice that didn’t get the antibody, the treatment greatly reduced virus levels in pregnant mice and their fetuses as well as in the placentas. CIDRAP

Testing of investigational inactivated Zika vaccine in humans begins

7 November - The first of five early stage clinical trials to test the safety and ability of an investigational Zika vaccine candidate called the Zika Purified Inactivated Virus (ZPIV) vaccine to generate an immune system response has begun at the Walter Reed Army Institute of Research (WRAIR) Clinical Trial Center in Silver Spring, Maryland. Scientists with WRAIR, part of the U.S. Department of Defense (DoD), developed the vaccine. ... The experimental ZPIV vaccine is based on the same technology WRAIR used in 2009 to successfully develop a vaccine for another flavivirus called Japanese encephalitis. The ZPIV vaccine contains whole Zika virus particles that have been inactivated, meaning that the virus cannot replicate and cause disease in humans. However, the protein shell of the inactivated virus remains intact so it can be recognized by the immune system and evoke an immune response. NIAID partially supported the preclinical development of the ZPIV vaccine candidate, including safety testing and non-human primate studies that found that the vaccine induced antibodies that neutralized the virus and protected the animals from disease when they were challenged with Zika virus. NIH

INFLUENZA

AFHSB: DoD Seasonal Influenza Surveillance Summary

For Week 43:

- NORTHCOM: Influenza activity was minimal for the majority of NORTHCOM.
APHC: U.S. Army Influenza Activity Report

For the week ending 29 October 2016 (Week 43), overall activity remains low in both Army and civilian populations. Also, no influenza-associated hospitalizations were reported in DRSi in week 43.

- **ILI Activity:** Army incident ILI outpatient visits in week 43 were 7% lower than the same week last year.
- **Influenza cases:** No hospitalized influenza cases were reported to APHC through DRSi in week 43; At this same time during the last influenza season, two influenza-associated hospitalization was reported.
- **Viral specimens:** During week 43, 88 of 607 (14%) laboratory specimens tested positive for respiratory pathogens. RHC-A reported most (50%) of the influenza A-positive specimens. APHC

CDC: Flu View - Weekly U.S. Influenza Surveillance Report

During week 43 (October 23-29, 2016), influenza activity was low in the United States.

- **Viral Surveillance:** The most frequently identified influenza virus subtype reported by public health laboratories during week 43 was influenza A (H3). The percentage of respiratory specimens testing positive for influenza in clinical laboratories was low.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System. CDC

ECDC: Flu News Europe

Week 43/2016 (24-30 October 2016)

- Activity remained low in the region, with few samples testing positive for influenza viruses (2% of sentinel samples), and is at levels similar to that observed for the same period in recent seasons.
- Since week 40/2016, influenza A viruses have predominated, with most of those subtyped being A(H3N2). European Center for Disease Prevention and Control/WHO
USAFSAM & DHA: DoD Global, Laboratory-Based, Influenza Surveillance Program

- During 23 October - 5 November 2016 (Surveillance Weeks 43 & 44), a total of 141 specimens were collected from 38 locations. Results were finalized for 115 specimens from 35 locations. During Week 43, one influenza A(H3N2) was identified. During Week 44, one influenza A(H3N2) and one influenza B were identified. Approximately 2% of specimens tested positive for influenza during Week 43 and 3% tested positive for influenza during Week 44. The influenza percent positive for the season is approximately 3%.

- As of 2 November 2016, 99% of required influenza vaccine doses for all services have been shipped (Defense Logistics Agency).

US Air Force School of Aerospace Medicine & Defense Health Agency

VETERINARY/FOOD SAFETY

He thinks he caught TB from a wildebeest

6 November - ... Wildebeests are one of 21 animal species in South Africa's Kruger National Park known to carry zoonotic tuberculosis. ... Each year, some 149,000 people come down with zoonotic TB. It’s caused by *Mycobacterium bovis* rather than *Mycobacterium tuberculosis*, the usual culprit for TB in humans. Zoonotic TB can affect any warm-blooded animal but is most frequently found in livestock and wild animals. It’s also been linked to circus animals like elephants because they live in close confinement. Dogs and cats rarely get it, so pet owners don’t need to worry much. But farmers, vets, slaughterhouse workers and butchers are at risk. Animals can not only carry the disease but can be sickened by it as well. The most common routes of transmission are through unpasteurized milk, raw or undercooked meat, airborne infection and direct contact with infected animals. NPR

U.S.: California woman faces jail time for selling ceviche on Facebook

7 November - A California woman who faces up to two years behind bars for selling food through a Facebook group said she’s in disbelief as she prepares for the start of her trial this week. Mariza Ruelas, a single mother of six, is expected to appear in court Thursday over two misdemeanor citations for operating a food facility and engaging in business without a permit—each which carry a maximum of up to a year in jail. The 37-year-old is in trouble with prosecutors who say she sold an undercover investigator a $12 plate of ceviche on Facebook last year. “It’s just crazy because people have been selling out their trunks and out...
of parking lots for years,” Ruelas told TIME on Monday. “I never knew it would be a problem.” 

**U.S.: Health officials investigate *Salmonella* outbreak, possibly linked to limu poke**

7 November - The Hawaii Department of Health (HDOH) is investigating 14 cases among children and adults of *Salmonella* infection on Oahu. Health officials say all of the cases developed diarrheal illness from mid- to late October. Four of those cases required hospitalization. A source has not been confirmed, however preliminary investigations found a possible link to poke that contained limu (also called “ogo” or “seaweed”). According to the Department of Health’s Sanitation Branch, the tainted product may have come from a farm in Kahuku called Olakai. ... The farm was ordered by the department to halt operations and advise its customers to remove product from sale immediately. Owner Wenhao Sun tells us cleaning began as soon as he found out the test came back positive. Samples will be retested once the facility is cleaned. 

**Wellness**

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**After a suicide attempt, the risk of another try**

7 November - ... Suicide surpasses homicide in this country. Every 13 minutes someone in the United States dies by his own hand, making suicide the nation’s 10th leading cause of death over all (42,773 deaths in 2015), but second among those aged 15 to 34. ... [A] new study reveals just how lethal suicide attempts, as a risk factor for completed suicide, are. The study ... tracked all first suicide attempts in one county in Minnesota that occurred between January 1986 and December 2007 and recorded all the deaths by suicide for up to 25 years thereafter. Eighty-one of the 1,490 people who attempted suicide, or 5.4 percent, died by suicide, 48 of them in their first attempt. ... When all who succeeded in killing themselves were counted, including those who died in their first attempt, the fatality rate among suicide attempters was nearly 59 percent higher than had been previously reported. ... The study also showed that the odds of successfully committing suicide are 140 times greater when a gun is used than for any other method. Dr. Bostwick said that most suicide attempts are “impulsive acts, and it’s critical to prevent access to tools that make impulsive attempts more deadly.**

**Creating a smoking machine**

8 November - While it is well known that cigarette smoking is a major cause of lung disease, and a key exacerbating factor for patients suffering from chronic obstructive pulmonary disease (COPD), it has not been possible to effectively model its deleterious effects on human lungs under normal breathing conditions. In an article in Cell
Systems, a multidisciplinary team at the Wyss Institute for Biologically Inspired Engineering at Harvard University describes an instrument they engineered that can “breathe” in and out, actively smoke regular and electronic cigarettes much like a human, and deliver the smoke to microfluidic organs-on-chips lined by human lung small airway cells isolated from non-smokers or COPD patients. The integrated smoking system gives researchers a better understanding of smoke-related pathological changes in individual smokers, and could facilitate the discovery of more accurate biomarkers and new therapeutic targets. 

Harvard Gazette

Energy drinks and hepatitis: Case reveals potential danger

6 November - In a case report published recently in the British Medical Journal, the authors describe an unusual case of hepatitis apparently brought on by binge drinking energy drinks. ... This is the second published report of hepatitis due to energy drinks. The authors continue to say as the energy drink market continues to rapidly expand, consumers should be aware of the potential risks of their various ingredients. Vitamins and nutrients, such as niacin, are present in quantities that greatly exceed the recommended daily intake, lending to their high risk for harmful accumulation and toxicity. Most common energy drinks, Red Bull, Monster and others, can contain greater than 100 percent of the recommended daily value of niacin.

Outbreak News Today

Exercise: It's what the doctor ordered

8 November - On Friday, Weill Cornell Medical College offered a seminar to its second-year medical students, one that’s been offered only once before. The focus wasn’t cutting-edge pharmacology or modern microbiology but instead, five lecturers exploring different facets of a single topic: "Prescribing the Medicine of Exercise." ... The seminar teaches medical students how to counsel their patients to exercise, one of the most effective forms of preventive medicine. ... Metzl points out that type 2 diabetes, which is largely a preventable disease, ranks among the most expensive disease in the US. Since treating diabetes and all of its complications costs billions of dollars each year, it is time we give more attention to how this chronic disease can be prevented, he said. CNN

Food pantries try nutritional nudging to encourage good food choices

7 November - "Nudging" — a sales tactic that tries to make food look more appealing and easy to reach — encourages people to buy something. And as several food banks around the country have been learning, the tactic works well. ... Sharing Life and a dozen other food pantries in Texas, New Jersey and Colorado participated in a study conducted by Cornell University and Feeding America, where Christine Rivera is a registered dietitian. ... For the study, a short list of "foods to encourage" was compiled: whole wheat bread,
oatmeal, onions, cabbage, oranges and carrots. Cabbage bins were elevated, so people wouldn't have to stoop. Glossy photos of oranges were hung in food pantry waiting areas. Boxes of oatmeal were stacked next to a sign that said "Fills you longer," in both English and Spanish. The end result? "Nudging" led to a 46 percent increase in people taking home at least one of the featured foods. NPR

Frequent vaping by teens linked to heavy smoking later

8 November - Adolescents with a regular vaping habit aren't just more likely to take up smoking; they also have higher odds of developing a heavy cigarette habit, a U.S. study suggests. The research, published in the Journal of the American Medical Association, calls into question whether e-cigarettes can be an effective cessation aid, said lead study author. ... "Our most recent study is the first to show that teenagers who vape not only experiment with cigarettes, but are also more likely to become regular smokers," Leventhal said by email. "It is also the first time teenage vaping has been linked to heavier smoking patterns involving use of multiple cigarettes per day." Reuters

Is high-intensity interval training the fast track to health?

8 November - ... [I]nterval training ... alternates short bouts of relatively intense efforts with periods of recovery. ... [H]igh intensity interval training or HIIT, mixes rest periods with intense bouts that get your heart pumping to at least 80 percent of your maximal rate. ...[S]print interval training, or SIT, is even harder: Those intense bouts are all-out efforts. ... If you compare a similar dose of exercise, say calories burned or total workload, achieved with HIIT with moderate steady exercise, the HIIT produces superior benefits in outcomes including cardiorespiratory fitness and blood glucose control. ... [Research on whether] you can get similar or superior benefits from a relatively smaller dose of HIIT training compared to a bigger dose of moderate aerobic training ... is more limited. There is some evidence that short SIT sessions can provide similar cardiorespiratory fitness benefits compared to longer steady exercise sessions. NPR

Scientists develop new type of HIV test on a USB stick

10 November - Scientists in Britain have developed a type of HIV test using a USB stick that can give a fast and highly accurate reading of how much virus is in a patient's blood. The device ... uses a drop of blood to detect HIV, then creates an electrical signal that can be read by a computer, laptop or handheld device. The researchers say the technology, although still in the early stages, could allow patients to regularly monitor their virus levels in a similar way to diabetes patients checking their blood sugar levels. It could be particularly useful in remote settings to help HIV patients manage their treatment more effectively, since current tests to detect virus levels take at least three days and involve sending a blood sample to a laboratory. Reuters
To create a quieter city, they’re recording the sounds of New York

6 November - On Thursday, microphones mounted outside two buildings in Manhattan went live. ... A group of researchers from New York University and Ohio State University are training the microphones to recognize jackhammers, idling engines and street music. ... Snippets of audio, about 10 seconds each, will be collected during random intervals over the course of about a year to capture seasonal notes, like air-conditioners and snowplows. The cacophony will be labeled and categorized using a machine-listening engine called UrbanEars. The sensors will eventually be smart enough to identify hundreds of sonic irritants reverberating across the city. The goal of the project, Sounds of New York City, or Sonyc, is to create an aural map that a group of researchers hopes will help city agencies monitor and enforce noise pollution, and will empower citizens to assist in the process.

The New York Times

U.S.: Prevalence of vaccine-type HPV reduced by half

8 November - A new study in the Journal of Infectious Diseases shows that human papillomavirus (HPV) vaccination in the United States has dramatically reduced the prevalence of vaccine-type HPV strains in only 2 years. Between 2009 and 2012, the proportion of women ages 18 to 26 who received the HPV vaccine doubled from 17.1% to 34.5%. ... Researchers found that the prevalence of vaccine-type HPV decreased almost 45% from 15.4% in 2009-2010 to 8.5% in 2011-2012 in women ages 18 to 26. The prevalence of high-risk vaccine-type HPV in 2009-2010 was 13.1%, but was reduced to 6.5% by 2012.

CIDRAP News Scan (second item)

WHO doubles recommended number of health visits during pregnancy

7 November - The World Health Organization revised guidelines on antenatal care on Monday, saying pregnant women should have twice as many contacts with health providers - eight - as it recommended previously. More antenatal contacts help to reduce the chance of stillbirths, with 8 fewer perinatal deaths per 1,000 births, the WHO said in a statement. ... Only 64 percent of women received antenatal care four or more times during their pregnancy. The new WHO guidelines include 49 recommendations touching on diet, physical activity, tobacco, malaria, blood tests, tetanus vaccinations and the use of ultrasound. There is also advice on problems such as nausea, back pain and constipation. The recommendations include taking 30-60 milligrams of iron supplements and 0.4 mg folic acid daily during pregnancy.

Fox News

Worrying about good health may lead to bad health

7 November - People who, in spite of being healthy, constantly worry about their health may be actually ruining it. According to a study conducted in Norway, persistent uneasiness about a possibility of getting a disease, called health anxiety, proved to be a serious risk
factor for developing a heart disorder. After following the health of 7,052 people for 12 years, researchers at Sandviken University hospital in Bergen found that those with health anxiety were 73 percent more likely to develop a heart disease. Scientists say the study relied on verbal reports by patients about their health worries, so they do not know whether they had any legitimate reasons to be anxious. VOA

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USAFRICOM

Africa: Drug-resistant TB higher than thought in West Africa

3 November - Researchers have found the number of multidrug-resistant tuberculosis cases in West Africa is greater than thought. Officially, the World Health Organization estimates the incidence of new cases of so-called MDR-TB in the African region is 2 percent, and 17 percent among people who were treated for TB more than once. But investigators on the ground in eight West African countries came up with higher numbers. They report that 6 percent of new cases and 35 percent of retreatment cases are drug-resistant to more than one medication. An analysis of almost 974 sputum samples from TB patients carried out by the West-African Network of Excellence for TB, AIDS and Malaria (WANETAM), found that 39 percent were resistant to at least one first-line antibiotic used to treat tuberculosis. Additionally, bacterial isolates in 22 percent of the samples did not respond to two or more anti-TB drugs. VOA

Africa: Ebola evolved into deadlier enemy during the African epidemic

3 November - The Ebola epidemic that tore through West Africa in 2014 claimed 11,310 lives, far more than any previous outbreak. A combination of factors contributed to its savagery, among them a mobile population, crumbling public health systems, official neglect and hazardous burial practices. But new research suggests another impetus: The virus may have evolved a new weapon against its human hosts. ... [T]wo teams of scientists report that a genetic mutation may have made Ebola more deadly by improving the virus’s ability to enter human cells. The researchers do not yet understand exactly how it works, but several lines of evidence suggest it helped expand the scope of the epidemic. One alarming finding: Patients infected with the mutated version of Ebola were significantly more likely to die. ... [O]ne mutation arose at a crucial point in the outbreak. Known as GPA82V, it was first observed in viral samples collected from a patient in Guinea on March 31, 2014. Ebola viruses carrying GPA82V exploded across all three countries. The original version of the virus, by contrast, sputtered on at low levels in Guinea before disappearing in a couple of months. The New York Times
South Africa: Young lives

Fall 2016 - ... In the coming years, South Africa will be home to a bulging population of 500,000 HIV-positive adolescents and more than two million AIDS orphans. Most of these HIV-infected young people were born with the virus. In Soweto, which has an estimated population of 2.5 million to 4 million people, hospitals deliver around 30,000 babies each year. One-third are born to HIV-infected mothers. The worry is that as more HIV-positive adolescents mature and become sexually active, they could undo many of the gains made by the nation’s prevention strategies. This population could also act as a reservoir for common HIV-related co-infections like tuberculosis. ... Successfully treating South Africa’s young people will be an integral part of meeting Fast Track goals established by the Joint United Nations Programme on HIV/AIDS. .. For researchers, however, the questions are daunting: How can they develop treatment tailored to adolescents? How can they keep those adolescents engaged in the treatments they’ll need for the rest of their lives?

Hopkins Bloomberg Public Health

Zimbabwe: As health system collapses, Zimbabwe turns to street herbs

6 November - Zimbabwe’s public health system is collapsing along with the economy, with some major hospitals suspending all non-emergency surgeries because painkillers are scarce. Some in this southern African country are turning to the growing number of peddlers of traditional medicines, many of them young men occupying street corners in the capital, Harare. ... The Medicines Control Authority of Zimbabwe, the medicines regulatory body, said it was battling to control the “influx” of people selling herbs and other medicines. ... The Zimbabwe National Traditional Healers Association, which keeps a register of certified herbalists in the country, said many of those selling herbs on the streets are not on its books. "They are mushrooming everywhere. Most of them are bogus,” said George Kandiero, president of the association. ABC News

Iraq: WHO establishes rapid response teams to safeguard the health of newly displaced people from Mosul, Iraq

6 November - In light of increasing risks of disease epidemics and life-threatening health conditions among displaced populations from Mosul, WHO has established 82 rapid response teams to provide life-saving health services and respond to public health threats.
A total of 11 response teams for outbreaks detection and epidemics control, 39 response teams for the management of exposure to chemical agents and 32 vaccination teams are currently positioned in Ninewa, Kirkuk, Baghdad, Dahuk and Erbil governorates. Trained and supported by WHO, these teams will be deployed by directorates of health to screening sites, camps, and other areas hosting internally displaced persons (IDPs). ReliefWeb

**Kyrgyzstan: Kyrgyzstan receives WHO certification of malaria elimination**

4 November - In April 2016, WHO declared that the European Region had achieved an important milestone: all 53 countries in the region had interrupted the chain of indigenous malaria transmission for at least 1 year. Countries that maintain zero locally-acquired malaria cases for at least three consecutive years are eligible to apply for a certification of malaria elimination by WHO. ... Today, the Republic of Kyrgyzstan received the official WHO certification of malaria elimination. Globally, a total of 32 countries and territories have received this WHO certification, including 19 countries in the European Region. WHO

**Yemen: Cholera update in Yemen**

6 November - The Ministry of Public Health and Population has published updated figures for cholera cases in the country. A total of 2733 suspected cases and 51 associated deaths have been reported in Ta‘izz, Aden, Lahij, Al Hudaydah, Hajjah, Sana’a, Al Bayda, Dhamar and Ibb. 75 cholera cases have been laboratory-confirmed so far. While acute watery diarrhoeal diseases are endemic in Yemen, the ongoing conflict has stretched the capacity of the national health systems. More than 7.6 million people are currently living in areas affected by the outbreak, as well as more than 3 million internally displaced persons. WHO

**Yemen: Yemen faces humanitarian disaster from crippled health infrastructure, says WHO**

7 November - The World Health Organization (WHO) on Monday reported that more than half of Yemen’s hospitals and medical clinics are closed or only functioning partially, warning of the severe consequences that will likely take place due to damaged public health infrastructure. Only 45 percent of the country’s 3,500 health facilities surveyed by the UN’s international public health organization were fully functional and accessible, the WHO said. Meanwhile, in 42 percent of the nearly 300 districts examined, there were two or fewer doctors, while 20 percent of them had none. ... "Absence of adequate communicable diseases management increases the risk of outbreaks such as cholera, measles, malaria and other endemic diseases," it added. Deutsche Welle
Italy: As Nigerian sex trafficking rises, Italy tracks crime kingpins

9 November - ... Nigerian crime gangs have proliferated in Italy, controlling an extensive network of prostitutes and ordering them "on demand" from Nigeria, Italian police and prosecutors say. But now the Nigerian gangs, who have been active in Italy for more than a decade, are taking on increasingly violent tactics, including knife crime and even forging close relations with notorious mafia groups, the Cosa Nostra and the Camorra, law enforcement agencies in Italy say. ... At least 16 Nigerians have been arrested on trafficking offences since the start of 2016 in the Catania jurisdiction in Sicily, up from around 10 the previous year. ... Around 12,000 Nigerian women arrived in Italy by sea in 2015 and 2016, data from the International Organisation for Migration (IOM) shows - a six-fold increase on the previous two years. Almost 80 percent of the young women are victims of trafficking, according to the International Organisation for Migration (IOM), placing law enforcement agencies under pressure to uproot expanding Nigerian criminal networks, lawyers say.

Thomson Reuters Foundation

USNORTHCOM

Canada: *Borrelia mayonii*-like bacteria found in British Columbia ticks

8 November - Provincial health officials in British Columbia and national public health have confirmed a new species of bacteria closely related to *Borrelia mayonii* (*B. mayonii*) in three ticks since the summer. “This is a rare discovery which highlights that our tick surveillance program is working at both a local and national level,” said Dr. Eleni Galanis, physician epidemiologist with the BC Centre for Disease Control (BCCDC). “While further investigation is warranted, the health threat posed by this new species of bacteria is extremely low.” *Borrelia mayonii* is a newly-discovered species of bacteria that can cause Lyme disease in people. Until now, it had only been confirmed in the Midwestern United States.

Outbreak News Today

Canada: Winnipeg lab employee possibly exposed to Ebola virus

8 November - An employee at the National Centre for Foreign Animal Disease in Winnipeg has potentially been exposed to the Ebola virus. The employee was working on Monday in a
A lab with pigs that had been infected with the deadly virus when they noticed a tear in their protective suit. Officials with Canada's public health and food inspection agencies made the announcement on Tuesday. They said there is currently no risk to the public. The unnamed employee is in self-imposed isolation and will be monitored for the next 21 days, which is the incubation period for the virus. The employee was also offered an Ebola vaccine that has been used in clinical trials in Africa. BBC News

U.S.: FDA advisory panel recommends new antibiotic for approval

8 November - An advisory panel to the US Food and Drug Administration (FDA) voted on Nov 3 to recommend a new antibiotic to treat community-acquired pneumonia (CABP), despite concerns over liver toxicity. In a 7-6 vote, members of the FDA’s Antimicrobial Drugs Advisory Committee recommended approval of the drug solithromycin, a macrolide antibiotic that has activity against macrolide-resistant CABP pathogens. But while the panel voted unanimously (13-0) that there was substantial evidence of solithromycin’s efficacy, and that the drug works as well as moxifloxacin in patients with CABP, they also voted 12-1 that the risk of hepatoxicity has not been adequately characterized. ... The panel recommended that drug maker Cempra Inc. be required to conduct additional studies on potential liver damage after the drug is approved. CIDRAP Antimicrobial Resistance Scan (first item)

U.S.: First cases of Candida auris reported in United States

4 November - Thirteen cases of Candida auris (C. auris), a serious and sometimes fatal fungal infection that is emerging globally, have been identified in the United States, according to the Centers for Disease Control and Prevention (CDC). Seven of the cases occurred between May 2013 and August 2016 and are described today in CDC’s Morbidity and Mortality Weekly Report (MMWR). The other six cases were identified after the period covered by the report and are still under investigation. The report is the first to describe U.S. cases of C. auris infection. C. auris is often resistant to antifungal drugs and tends to occur in hospitalized patients. CDC

U.S.: Marijuana and soda taxes win big, but cigarette taxes fail in several state votes

9 November - Marijuana advocates racked up big wins across the country Tuesday, as voters in California, Nevada, and Massachusetts approved recreational pot use and voters in Arkansas, Florida, and North Dakota gave the green light to medical cannabis. ... The only state where marijuana decisively lost: Arizona, where voters rejected recreational legalization. ... In other ballot results, California voters approved a whopping $2-a-pack increase on the cigarette tax, which had been one of the lowest in the nation. ... Voters in Colorado and North Dakota both rejected hefty cigarette tax hikes, and a small proposed
tax hike was trailing in Missouri. Voters in Boulder, Colo., and in three California Bay Area communities — San Francisco, Oakland, and Albany — all OK’d new soda taxes. Stat

U.S.: Nearly every American will know victim of gun violence

1 November - Nearly all Americans are likely to know a victim of gun violence within their social networks during their lifetime, indicating that citizens are “closer to gun violence than they perceive,” according to a new study by researchers from the Schools of Public Health and Medicine. In a study in the journal *Preventive Medicine*, the research team used fatal and non-fatal gun injury data from the Centers for Disease Control and Prevention (CDC) and estimates of the number of social relationships a person accrues during his or her lifetime to gauge the likelihood of Americans knowing a gun violence victim. Overall, the likelihood within any given personal network was 99.85 percent; it was higher for blacks (99.9 percent) and Hispanics (99.5 percent) than for non-Hispanic whites (97.1 percent). The likelihood of knowing a gun violence victim who died (rather than being injured) was 84.3 percent overall, with blacks and non-Hispanic whites having the highest likelihood.

*Boston University School of Public Health*

U.S.: Oklahoma earthquake reignites concerns that fracking wells may be the cause

7 November - A 5.0 magnitude earthquake that rattled north-central Oklahoma Sunday was only the sixth of that strength in state history and has reawakened concerns that oil and gas activity could be causing the tremors. The temblor, which occurred around 7:44 p.m. Sunday about a mile west of Cushing, Okla., sheared bricks off buildings, caused structural damage to homes and forced local schools to close Monday. Around 40 residents were evacuated from a retirement home and sheltered at a local gymnasium. ... The state has seen a severe spike in earthquakes of 3.0 magnitude or higher since 2008, when energy companies ramped up their hydraulic fracturing, or fracking, for oil and gas in the state, [George] Choy said. The number of 3.0 magnitude quakes rose from 2 in 2008 to 889 last year, according to USGS statistics. So far this year, there have been 572. *USA Today*

U.S.: Population well-being measures help explain geographic disparities in life expectancy at the county level

November 2016 - Geographic disparities in life expectancy are substantial and not fully explained by differences in race and socioeconomic status. To develop policies that address these inequalities, it is essential to identify other factors that account for this variation. In this study we investigated whether population well-being—a comprehensive measure of physical, mental, and social health—helps explain geographic variation in life expectancy. At the county level, we found that for every 1-standard-deviation (4.2-point) increase in the well-being score, life expectancy was 1.9 years higher for females and 2.6 years higher for
males. Life expectancy and well-being remained positively associated, even after race, poverty, and education were controlled for. In addition, well-being partially mediated the established associations of race, poverty, and education with life expectancy. Health Affairs

U.S.: Southern wildfires create smoky haze, prompt health concerns

9 November - Wildfires burning across the South have created a smoky haze over metro Atlanta and prompted a public health advisory in Kentucky — and the forests are expected to continue burning for days as flaming leaves fall to the ground and spread the fire, authorities said Wednesday. In Georgia, gusty winds from the north are bringing smoke from fires raging in the north Georgia mountains into the state capital and its suburbs, leading to some reduced visibility. … In Tennessee, seven firefighters were trapped Tuesday evening in a forest fire west of Kingsport, causing them to declare “Mayday.” All seven firefighters were later accounted for and none was injured. … In North Carolina, fire officials hoped to provide air support to crews battling a blaze that had spread to 344 acres, but high winds prevented helicopters from flying and dropping water onto the forest.

ABC News

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USPACOM

Australia: Intimate-partner violence in Australia has a shockingly big public health impact

7 November - A new national study published by Australia’s National Research Organisation for Women’s Safety (ANROWS) shows that intimate partner violence poses one of the highest health risks for all Australian women, and is the greatest contributor to health risk amongst women aged 18 to 44. The contribution of intimate partner violence to the “burden of disease” is greater for women of child-bearing age than alcohol use, tobacco use, cholesterol, obesity and other diseases. … The published study shows that one in three Australian women have experienced physical, sexual and/or emotional abuse by an intimate partner. The figure is one in six women when emotional abuse is excluded.

Scientific American

China: Knowledge and perceptions of air pollution in Ningbo, China

5 November - … A cross-sectional survey was conducted in Ningbo, China in January 2015. Personal information and questions pertaining to the knowledge, attitudes and practices towards ambient air pollution and health were collected through questionnaire
investigations. ... The awareness rate was 64.59 % and varied significantly with age, levels of
education, and occupation (all p < 0.05). Only 5.80 % of the total participants were satisfied
with the air quality in Ningbo in 2014. Most respondents (78.80 %) expressed concern about
the possible aggravation of the haze. More than 80 % of participants believed that it will
take at least 3-5 years or longer before the air quality is improved. Television and internet
resources have replaced books and newspapers as the primary sources for obtaining
knowledge about haze and related protective measures. BMC Public Health

India: Delhi shuts schools as smog sparks health 'emergency'

7 November - Authorities in Delhi on Monday closed schools, halted construction work and
shut down a major power plant after days of choking smog led to warnings of a health
"emergency" in the world’s most polluted capital. Pollution levels have spiked in recent days
as farmers in neighbouring Indian states burn crop stubble after the harvest and
temperatures cool, trapping pollutants in a smoggy haze over the city. ... [T]his year’s
change has been particularly dramatic, with the American embassy reporting hazardous
pollution levels for several days running. On Monday morning it put levels of PM2.5—the
fine particles linked to higher rates of chronic bronchitis, lung cancer and heart disease—at
an off-the-charts 778. Levels between 301 and 500 are classified as "hazardous", meaning
everyone faces a risk of respiratory effects and should stay indoors, while levels above 500
are beyond the official index. Phys.org

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Americas: Chikungunya total grows by 440

8 November - The number of chikungunya cases in the Americas so far this year grew by
440 cases last week to reach 303,547 suspected, confirmed, and imported infections,
according to the latest update from the Pan American Health Organization (PAHO). The
weekly increase is similar to the 452-case rise seen the previous week. Most of the new
cases were from Mexico, Costa Rica, El Salvador, Bolivia, and Colombia. One death was
removed from last week’s total, putting the number for the year at 105. The United States
has reported six more imported chikungunya cases this year, lifting its total to 119. Many
countries have not reported any new illnesses for several weeks.
CIDRAP News Scan (third item)
Bolivia: MSF develops an information system for exterminating the bugs that transmit Chagas

4 November - From this year, MSF is launching the central information system called eMOCHA in three municipalities within Narciso Campero Province in Bolivia. This system is a technological breakthrough that enables people to report the location of triatomine bugs or 'kissing bugs', the vector insects for Chagas disease, by sending an SMS so they can be removed quickly and efficiently. Developing this platform, which uses mobile and geo referencing (GPS) technology, has enabled the location of the bugs to be detected in real time. A free SMS can be sent to eMOCHA from anywhere using a mobile phone, so as to report households with the triatomine bug. The system then schedules a visit from a technician who, in addition to fumigating the property, will send additional data via a smartphone application that contributes towards the monitoring and control of the insect in the area. Médecins Sans Frontières

Brazil: Brazil’s health minister seeks to stem inefficiencies to cut costs

8 November - Brazil's government is renegotiating contracts and searching for inefficiencies in the country's mammoth public-health system ahead of a likely tightening in public spending starting next year, Health Minister Ricardo Barros said. The government has already managed to reduce the price it pays for drugs provided to millions of patients by renegotiating contracts with labs, Mr. Barros said. ... The minister said the savings will grow as the ministry speeds up a plan to automate paperwork in the public-health network so that information about each user will be more readily available. ... Critics have said the limits, which would kick in next year and stay in place for at least a decade, risk worsening public health in a country of 200 million where most people rely on government-provided hospitals and drugs. The Wall Street Journal

Haiti: Risks to women and girls soar in hurricane-slammed Haiti

4 November - ... Haitian women and girls have it tough even in the best of times. The country has the highest maternal death rate in the western hemisphere, and two thirds of women give birth at home. Physical and sexual violence are tragically commonplace. And that was before Hurricane Matthew. A recent assessment conducted by UNFPA and partners revealed widespread destruction to health facilities and massive shortages in health-care personnel. UNFPA estimates that 13,650 women will give birth in next three months in the areas affected by the hurricane. Among them, about 15 per cent will endure complications and require emergency care. ... UNFPA has deployed teams of midwives and mobile clinics to Grand’Anse and Nippes, two of the departments hardest-hit by the hurricane. ReliefWeb
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